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Form 1449 (Modified)	
Information Disclosure Statement By Applicant	
(Use Several Sheets if Necessary)	

Atty Docket No. CISCP601C2
 Application No.: 09/435,293
 Inventor Gregory G. Raleigh
 Group 2634
 Filing Date November 5, 1999

U.S. Patent Documents							
Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-Class	Filing Date
CY	A	6,097,771	8/1/2000	Foschini	375	346	7/1/96
	B						
	C						
	D						
	E						

Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
CY	F	2716055	8/11/1995	FR	—	—		
CY	G	0715477	6/5/1996	EP	—	—		
	H							
	I							
	J							

Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
CY	K	Seshadri N. et al., "Space-Time Codes for Wireless Communication: Code Construction" IEEE Vehicular Technology Conference, US NY IEEE Vol. Conf. 47 4 May 1997 pages 637-641
	L	
	M	
	N	
Examiner		Date Considered
<i>Chit Min Jan</i>		<i>9/17/01</i>

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.


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Atty Docket No. CISCP601C2

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Inventor
Group 2634

Filing Date
GREGORY G. RALEIGH
Unassigned
November 5, 1999
U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
CF	AA	4,337,376	06/1982	Gruenberg	179	2 EB	12/1979
CF	AB	4,710,944	12/1987	Nossen	375	40	10/1986
CF	AC	5,134,715	07/1992	Parl et al.	455	64	11/1989
CF	AD	5,228,025	07/1993	Le Floch et al.	370	20	01/1991
CF	AE	5,315,584	05/1994	Savary et al.	370	18	12/1991
CF	AF	5,345,599	09/1994	Paulraj et al.	455	49.1	02/1992
CF	AG	5,471,647	11/1995	Gerlach et al.	455	63	04/1993
CF	AH	5,479,444	12/1995	Malkamaki et al.	375	231	02/1994
CF	AI	5,510,779	04/1996	Wishart	342	373	06/1993
CF	AJ	5,515,378	05/1996	Roy, III et al.	370	95.1	12/1991
CF	AK	5,548,819	08/1996	Robb	455	59	08/1995
CF	AL	5,566,209	10/1996	Forssen et al.	375	262	02/1994
CF	AM	5,592,490	01/1997	Barrett et al.	370	310	01/1995

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							Yes	No
CF	AN	WO 95/22873	08/1995	PCT	—	—	TECH	RECEIVED
CF	AO	WO 96/30964	10/1996	PCT	—	—	JUN 20 2000	2000
CF	AP	WO 98/09381	03/1998	PCT	—	—	TECH CENTER 2700	RECEIVED

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Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
CF	AQ	Hirono et al., "Digital terrestrial television broadcasting with OFDM – A study on the performance of single frequency networks" 1996, Int'l Broadcasting Convention, p. 178-183.
Examiner	<i>Chih-Min Shao</i>	Date Considered <i>9/11/10</i>

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CF	BA	5,634,199	05/1997	Gerlach et al.	455	63	04/1995
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CF	BC	5,649,287	07/1997	Forssen et al.	370	312	03/1995
CF	BD	5,691,727	11/1997	Cyzs	342	361	12/1995
CF	BE	5,752,173	05/1998	Tsujimoto	455	137	06/1995
CF	BF	5,809,019	09/1998	Ichihara et al.	370	334	04/1996
CF	BG	5,886,988	03/1999	Yun et al.	370	329	12/1996
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Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
CF	BI	WO 98/09395	03/1998	PCT	—	—	TECH CENTER 2100	JAN 20 2000
CF	BJ	0253465	03/1987	EPO	—	—	RECEIVED	2000

Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
CF	BK	P.A. Voois, "Two-dimensional signal processing for magnetic storage systems", 1993, Ph.D. Thesis, Stanford University, pp. 1-136.
CF	BL	Biglieri et al., "Introduction to trellis coded modulation with applications", 1991, MacMillan Publishing.
CF	BM	P. Lancaster, "Theory of matrices", 1969, Academic Press, Chap. 2.
CF	BN	Raleigh et al., "Spatio-temporal coding for wireless communications", 1996, IEEE Transactions on Communications.

Examiner	Date Considered
<i>Chief Mem Jan</i>	<i>9/17/01</i>

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	CA						

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							Yes	No
CF	CB	WO 98/09395	03/1998	PCT	-	-	RECEIVED JAN 20 2001 TECH CENTER	

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Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication					
CF	CC	Justin C.I. Chuang, "Burst coherent demodulation with combined symbol timing, frequency offset estimation and diversity selection", 1991, IEEE, Vol. 39, no. 7, pp. 1157-1164.					
CF	CD	Leonard J. Cimini, Jr., "Analysis and simulation of a digital mobile channel using orthogonal frequency division multiplexing", 1985, IEEE, Vol. 33, No. 7, pp. 665-675.					
CF	CE	Kouichi Ohkawa, "Performance of multicarrier trellis-coded 8PSK using frequency hopping in rayleigh fading channels", 1994, Not. Conference Publication – Institution of Engineers, Vol. 1, pp. 145-149.					
CF	CF	Essam A. Sourour, "Performance of orthogonal multicarrier CDMA in a multipath fading channel", 1996, IEEE, Vol. 44, No. 3, pp. 356-367.					
CF	CG	Hirofumi Ichikawa, "Frequency diversity effects in multicarrier digital radio systems", 1991, Electronics and Communications in Japan, Prt. 1, Vol. 74, No. 8, pp. 70-77.					
Examiner	<i>Chief Mis. Fan</i>		Date Considered	<i>9/17/01</i>			

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U.S. Patent Documents

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	DA						

Foreign Patent or Published Foreign Patent Application

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							Yes
	DB						No

Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
CF	DC	J. L. Holsinger, "Digital communications over fixed time-continuous channels with memory, with special application to telephone channels", 1964, MIT Research Laboratory Electronics Report, Vol. 430.
CF	DD	Cover et al., "Elements of information theory", 1991, New York: John Wiley, Chp. 2, pps. 12-49, Chp. 8 pps. 183-223, and Chap. 10 pps. 239-265
CF	DE	R.J. Muirhead, "Aspects of multivariate statistical theory", 1982, New York: John Wiley, Chps. 4 and 5.
CF	DF	W.C. Jakes, "Microwave mobile communications", 1974, New York: John Wiley, Chps. 1, 5, and 6.
CF	DG	Braun et al., "A physical mobile radio channel model", 1991, IEEE Vehicular Technololgy, Vol. 40, pps. 472-482.
CF	DH	Bryson et al., "Applied optimal control", 1968, Washington D.C. Hemisphere Publishing, pps. 24-29.

Examiner Date Considered

Chiel Min Tan

9/17/01

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U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	EA						

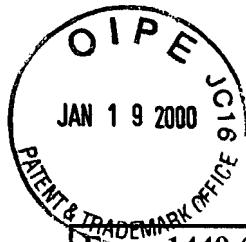
Foreign Patent or Published Foreign Patent Application

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							Yes	No
	EB							

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CF	ED	Mikael Gudmundson, "Spectral efficiency of a multitone frequency hopping system for personal communication systems", 1994, IEEE Vehicular Technology Conferences, prt. 3, Vol. 3, p. 1650-1654.		
CF	EE	T. Aron Gulliver, "Order statistics diversity combining in worst case noise and multitone jamming", 1995, IEEE Vehicular Technology Conference, Vol. 2, pp. 804-809.		
CF	EF	R. Monnier, "Digital television broadcasting with high spectral efficiency", 1992, IEEE Conference Pub. No. 358, pps. 380-384.		
CF	EG	Enrico Del Re, "Digital Multicarrier demodulator for regenerative communication satellites", 1988, Alta Frequenza, Vol. 57, No. 10, pps. 545-559.		
Examiner	<i>Chief Min Han</i>		Date Considered	9/17/01

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	FA						

Foreign Patent or Published Foreign Patent Application

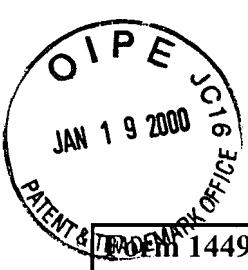
Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
	FB							

Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication		
CJ	FC	Youko Omori, "Multicarrier 16QAM system in land mobile communications", 1994, IEICE Transactions on Communications, Vol. E77-B, No. 5, pps. 545-559.		
JF	FD	Fulvio Ananasso, "Clock synchronous multicarrier demodulator for multi-frequency TDMA communications satellites", 1990, IEEE International Conference on Communications, Col. 3, pps. 1059-1063.		
CJ	FE	M. Friese, "Multicarrier modulation with low peak-to-average power ratio", 1996, Electronics Letters, Vol. 32, No. 8, pps. 713-714.		
CJ	FF	Adil Benyassine, "Optimal subchannel structuring and basis selection for discrete multicarrier modulation", 1995, IEEE Communications Theory Mini-Conference Proceedings, CTMC, pps. 97-101.		
CJ	FG	M. Sawahashi, "Multicarrier 16QAM transmission with diversity reception", 1996, Electronics Letters, Vol. 32, No. 6, pps. 522-523.		

Examiner	Date Considered
<i>Chiel Min Fan</i>	<i>9/19/01</i>

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	GA						

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Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation Yes	Translation No
	GB						RECEIVED JAN 20 2000 SEARCH CENTER 2100	

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Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
CF	GC	Flavio Daffara, "A new frequency detector for orthogonal multicarrier transmission techniques", IEEE 45 th Vehicular Technology Conference, pps. 804-809.
CF	GD	C.E. Shannon, "Mathematical theory of communications: Part I and Part II", 1948, The Bell System Journal, pps. 379-423, 623-656..
CF	GE	Fectel et al., "Optional feedforward estimation of frequency-selective fading radio channels using statistical channel information", 1992, in Proc. SUPERCOMM/ICC '92, Vol. 2.
CF	GF	Brandenburg et al., "Capacity of the gaussian channel with memory: the multivariate case", 1993, Bell System Technical Journal, Vol. 53, pps. 745-78.
CF	GG	Cheng et al., "Gaussian multiaccess channels with ISI: Capacity region and multiuser water-filling", 1993, IEEE Trans. Inform. Theory, Vol. 39(3), pps. 773-785.
CF	GH	J. Salz, "Digital transmission over cross-coupled linear channels", 1985, AT&T Tech. Journal, Vol. 64(6), pps. 1147-1159,

Examiner Chiel Min Jan Date Considered 9/19/01

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	HA						

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							Yes	
	HB							

Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication					
CH	HC	A. Duel-Hallen, "Equalizers for multiple input multiple output channels and PAM systems with cyclostationary input sequences", 1992, IEEE Journal on Sel. Areas in Comm., Vol. 10(3), pps. 630-639.					
CH	HD	Yang et al., "On joint transmitter and receiver optimization for multiple-input multiple-output (MIMO) transmission systems", 1994, IEEE Trans. Commun., Col. 42-(12), pps. 3221-3231.					
CH	HE	Yang et al., "Joint transmitter-receiver optimization for multi-input multi-output systems with decision feedback", 1994, IEEE Trans. Information Theory, Vol. 40(5), pps. 1334-1347.					
CH	HF	Cox et al., "Distributions of multipath delay spread and average excess delay for 910 Mhz urban mobile radio paths", 1975, IEEE Trans. Antennas and Prop., Vol. Ap-23, pps. 206-213.					
CH	HG	Weinstein et al., "Data transmission by frequency-division multiplexing using the discrete fourier transform", 1971, IEEE transactions on communications, vol. 19(5), pps. 628-634.					

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CF	IC	Ruiz et al., "Discrete multiple tone modulation with coset coding for the spectrally shaped channel", 1992, IEEE Trans. Commun, Vol. 40(6), pps. 1012-1029.				
CF	ID	R.M. Gray, "On the asymptotic eigenvalue distribution of toeplitz matrices", 1972, IEEE Trans. Information Theory, Vol. 18, pps. 725-730.				
CF	IE	G. Forney, "Maximum-likelihood sequence estimation of digital sequences in the presence of intersymbol interference", 1972, IEEE Trans. Inform. Theory, Vol. IT-18(3), pps. 363-378,				
Examiner	<i>Chiel Min Jian</i>		Date Considered		<i>9/17/01</i>	

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